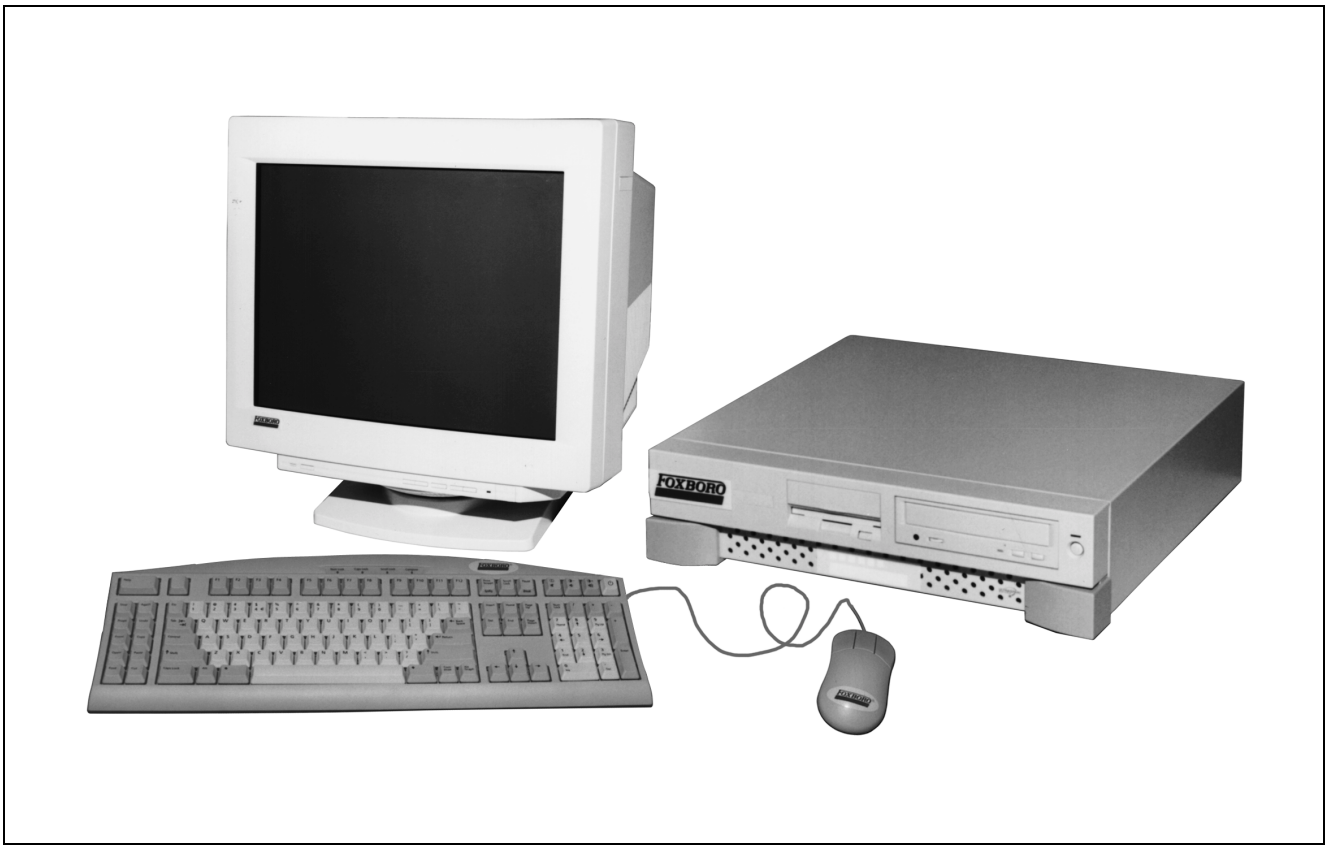
FOXBORO®

PSS 21H-4R2 B4

I/A Series® Hardware
50 Series Application Workstation Processor
AW51, Style D



The Application Workstation 51 (AW51), Style D processor, in conjunction with its peripherals, performs both application functions and workstation functions. The AW51, Style D processor provides a higher performance level than the AW51, Style B processor.

Application functions performed include:

- Execution of system application functions, such as those relating to:
  - Displays
  - Production control
  - User applications
  - Diagnostics
  - Configuration
- Development and execution of a broad range of application functions (Foxboro and third-party) requiring extensive data processing and file serving capabilities
- Processing of bulk storage file requests from tasks either within the same application processor or from other stations.

Workstation functions performed by the Application Workstation 51, Style D processor include:

- Generation of video signals to display graphic and textual display information on a monitor
- User interface devices including a touchscreen, a mouse or trackball, an alphanumeric keyboard, and up to two annunciator or annunciator/numeric keyboards.

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Product Specifications

An Enhanced Internal Device Electronics (EIDE) interface supports an internal system disk and a CD-ROM drive.The Application Workstation can support an external high speed, ultra-wide Small Computer System Interface (SCSI-3) when used with an optional SCSI-3 PCI card. This card provides an industry-standard bus which allows the workstation to support external peripherals having SCSI-compatible controllers, such as tape drives and RAID disk drives.

As symbolized by the **CE** logo on the workstation, this workstation conforms to the applicable European Union Directives.

Data interfacing with the I/A Series Nodebus is effected via a Dual Nodebus 10BaseT Interface (DNBT) Module or Dual Nodebus Interface Extender (DNBX) Module (refer to PSS 21H-7B2 B4).

Optional PCI cards supplying IBM Token Ring, AUI Ethernet, twisted-pair Ethernet, and Asynchronous Transfer Mode (ATM) communications ports provide for connection to other networks such as TCP/IP.(1)

Electrical interfacing between the Application Workstation 51, Style D with FoxBlock software and I/O devices is accomplished with(2):

- A serial interface card for RS-232-C connectivity to Modicon Programmable Controllers or Allen-Bradley PLCs
- An Ethernet card for connectivity to Allen-Bradley PLCs.

The Application Workstation 51, Style D Processor contains the following elements:

- Processor logic
- Dynamic memory
- On-board video display function
- Two serial interface ports (one used as either printer or terminal port, and one used as Nodebus interface)
- Parallel interface for PostScript printer
- 3.5-inch 1.44 MB disk drive
- Enhanced Internal Device Electronics (EIDE) bus
- Maximum of one internal hard drive: 8.4 GB
- External drives: RAID1 or RAID5
- Internal 644 MB CD-ROM drive
- Optional external 12.0 GB 4 mm digital tape drive
- Optional external 25 GB AIT tape drive
- Optional PCI cards(3):
  - IBM Token Ring communications port
  - MII Connector plus 10/100 Mbps twisted-pair Interface. MII Ethernet communications port provides AUI Ethernet interface when used in conjunction with MII-to-AUI Adapter(3)
  - Ultra-Wide SCSI-3(4) (for SCSI function) plus twisted-pair 10/100 Mbits/sec (slow/fast) Ethernet communications port
  - Serial Controller card with 8-port controller box
  - ATM 155 Mbits/sec network connection via twisted-pair communications port
  - ATM 155 Mbits/sec network connection via fiber cable communications port
  - Optional PGX video card for dual-head video interface

FUNCTIONAL SPECIFICATIONS

Devices Served

EIDE PERIPHERALS(a)
One internal hard disk drive and CD-ROM drive
SCSI PERIPHERALS(b)
Up to two external SCSI-based drives(c)
FLOPPY DISK DRIVE PERIPHERAL
1.44 MB 3.5-inch disk drive(d)
VIDEO INTERFACE
One integrated, and one optional interface, supporting up to two color video monitors
HUMAN INTERFACES(e)
Alphanumeric keyboard
Mouse or trackball

Devices Served (Cont.)

Annunciator or annunciator/numeric keyboard (up to two per monitor)
Touchscreen (one per monitor)
Alarm printer
PostScript printer
Color PCL3 printer

Processor Type

64-bit RISC Processor

RAM Memory

64 MB (default), expandable to 256 MB

(1) A separate security router may be required in conjunction with these optional information network connections to isolate I/A Series system from other unrelated network traffic. Foxboro Information Technology and Application Consulting can provide information on network planning and recommendations.
(2) The AW51, Style D has up to three optional PCI slots.
(3) This card and adapter can function as an interface to the Allen-Bradley Data Highway.
(4) The maximum number of SCSI devices attached to the Application Workstation, Style D is limited by the maximum allowable SCSI-3 equivalent cable length, which is 3 meters (10 feet). Up to two SCSI devices can be used externally with the workstation.

FUNCTIONAL SPECIFICATIONS

Screen Presentation
REFRESH RATE
Up to 76 frames/s
COLORS
32 for user displays, 8 for menu bar; selectable from a palette of over 16 million.
MARKER SETS
4 sets, up to 255 markers in each set. 2 (default) sets supplied by Foxboro; 2 can be created by user.
CHARACTER SETS
4 (default) sets supplied by Foxboro; additional non-Foxboro sets also supplied.
RESOLUTION (PIXELS)
Up to 1280 horizontal, 1024 vertical
1152 x 900 (default)

Video Output
TYPE
Analog (EIA RS–170): Red, Blue, Green, Sync.
Maximum Cable Length
30 m (100 ft) for 21-inch monitor
1.8 m (6 ft) for 17-inch monitor

Power Requirements (Processor Only)
INPUT VOLTAGE
100-120 V ac or 200-240 V ac (auto-switching)
CONSUMPTION
120 W

Nodebus Interface Communications
TYPE
IEEE 802.3 data bus and
EIA RS-423 control bus
Maximum Distance From Nodebus Using Dual Nodebus 10BaseT Interface Module
91 m (300 ft)
Maximum Distance From Nodebus Using Dual Nodebus Interface Extender Module
450 m (1500 ft)

Ethernet Interface Communications
TYPE (10BASET OR MII OUTPUTS AVAILABLE)
Maximum Distance of 10/100BaseT Cable
91 m (300 ft) for 21-inch monitor

Parallel Interface Communications
Centronics Parallel Interface for Color PostScript Printer

Serial Interface Communications
TYPE
EIA RS-423 (RS-232-C compatible)
Maximum Distance (DNBX)
450 m (1500 ft)
Maximum Distance (Printer)
15 m (50 ft)

Error Detection
COMMUNICATION ERRORS
Cyclic redundancy codes (CRC) and checksum codes
MEMORY ERRORS
Error checking and correcting (ECC)
SCSI ERRORS
Parity code

Internal Diagnostics
Self-checking performed at power-up. Run-time checks and watchdog timer function performed during operation.

Optional PGX Video Card
Supports additional display in dual display configurations

Optional IBM Token Ring Communications Card (f)
Supports port for IBM Token Ring data bus

Optional Twisted-Pair 10/100 Mbps Ethernet Interface with MII Connector Card (f)
When used in conjunction with MII-to-AUI Converter, supports AUI port for 10 Mbits/sec Ethernet data bus. Also contains 10 or 100 Mbits/sec (slow/fast) Ethernet twisted-pair data bus communications port

Optional Twisted-Pair 10/100 Mbps Ethernet Interface Card with Ultra Wide SCSI Port (f)
This card supports both ultra-wide SCSI-3 bus (used for providing external SCSI functions) and 10/100 Mbits/sec (slow/fast) Ethernet twisted-pair data bus communications port.

Optional ATM 155 Mbits/sec Twisted-Pair Ethernet Communications Port (f)
This card provides a port for ATM155 Mbits/sec network connection via twisted-pair connections.

(a) Enhanced Internal Device Electronics.
(b) Small Computer System Interface (ANSI Standard ANSC X3T9.2).
(c) An Application Workstation, Style D can use either internal or external hard drives, not both.
(d) Disk drive is mounted internally.
(e) One serial interface communication port provides for peripheral communications: a printer or a group of serially connected input/output devices, touchscreen and up to two annunciator or annunciator/numeric keyboards.
(f) A separate security router may be required in conjunction with these optional information network connections to isolate I/A Series from other unrelated network traffic. Foxboro Information Technology and Applications Consulting can provide information network planning and recommendations.

FUNCTIONAL SPECIFICATIONS (Cont.)

Optional ATM 155 Mbits/sec Fiber Communications Port (f)

This card provides a port for ATM155 Mbits/sec network connection via fiber optic connections.

Optional Serial Card with Controller Box Supplying Eight Communications Port (f)

This card and controller box provides eight serial ports for connection with RS-232-C compatible devices, such as Modicon devices.

ENVIRONMENTAL SPECIFICATIONS

Operating

TEMPERATURE
10 to 35°C (50 to 95°F)
RELATIVE HUMIDITY
40 to 80%, wet bulb of 27°C (81°F)
ALTITUDE
0 to +3,000 m (0 to 10,000 ft.)

Storage

TEMPERATURE
–20 to +60°C (–4 to +140°F)
RELATIVE HUMIDITY
30 to 90%, noncondensing
ALTITUDE
–300 to +12,000 m (–1,000 to +40,000 ft.)

PHYSICAL SPECIFICATIONS

Mounting

I/A Series Industrial Enclosure, metal enclosure, Modular Industrial Workstation, Modular Industrial Console, tabletop mounting, or 19-inch rack mounting (using Foxboro designed dual height modular mounting structure).

Mass (Maximum)

10.0 kg (22.0 lb)

DIMENSIONS—NOMINAL

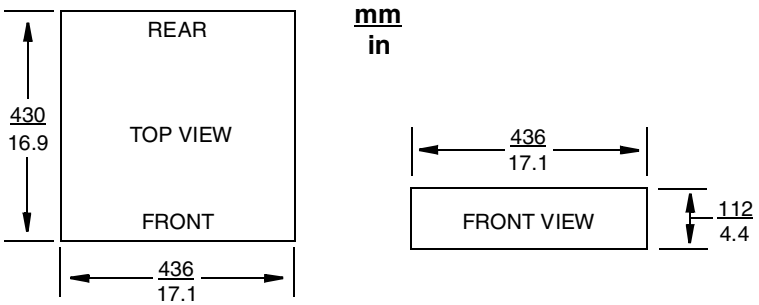

Figure 1. Application Workstation, Style D Dimensions

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